



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,022	09/23/2005	Hyun-Kyo Kim	2743-0174PUS1	3847
2292 7590 08/22/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER SCHATZ, CHRISTOPHER T				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
08/22/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/550,022

**Applicant(s)**

KIM, HYUN-KYO

**Examiner**

CHRISTOPHER SCHATZ

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-300)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 6/2/06: 9/23/05

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Group I, claims 1-3, 5 and 7 in the reply filed on June 6, 2008 is acknowledged. The traversal is on the ground(s) that Group I and Group II relate to a single inventive concept because they share the same or corresponding special technical features. This argument is not found convincing for several reasons. First, contrary to applicant's assertion, the limitation in claim 1 requiring "mixing 0.05% to 0.1% by weight of the silver based-based antibiotic substance in the form of pellets with a resin" is NOT a shared technical feature among the groups. Rather, the shared technical feature is "mixing the silver based antibiotic substance in the form of pellets with a resin." This feature does not qualify as a special technical feature because it does not make a contribution over the prior art, as evidenced by Miira.

The applicant asserts that the examiner must consider each invention as whole and not focus on a particular feature of each group. The applicant should note that the examiner need only show that the shared technical features between the groups do not make a contribution over the prior art. "With respect to a group of inventions claimed in an international application, unity of invention exists only when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features." MPEP 1850 (II). In other words, unity of invention only exists if a limitation shared between the groups qualifies as a special

Art Unit: 1791

technical feature. In this case, none of the shared limitations qualify as special technical features.

2. Applicant's election with traverse of Species B, claim 3 in the reply filed on June 6, 2008 is acknowledged

The traversal is on the ground(s) that 37 C.F.R. 1.146 allows a reasonable number of species in an application. The examiner asserts that 37 C.F.R. 1.146 does not set forth such a statement. Rather, the rule says that the examiner may not require restriction of more than a reasonable number of species. Nonetheless, the applicant should note that because this instant applicant was filed as a 371 national stage application, restriction of species is governed by the rules and procedures set forth in MPEP 1850.

The requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Claim 7 requires that the preform of the finished product be formed by means of a master batch method. The claim, as being dependent upon claim 1 and 3, thus requires that the silver based substance be mixed into the preform of the part and that a layer comprising the silver based substance mixed with a resin be formed on the surface of the preform by multi-extrusion. The specification does not provide proper antecedent basis for such a method. The specification only provides proper antecedent basis for a method of mixing

a silver based substance with a resin using a master batch method and then forming the preform by injection molding with the silver based substance mixed with the resin. The applicant is required to amend the specification to provide proper antecedent basis for a method requiring the mixing of the silver based substance with a resin, forming a preform of part from said mixed silver based substance and resin, and forming an antibiotic layer on said formed preform, wherein said antibiotic layer is formed by mixing the silver based substance in the form of pellets with a resin as required by claim 1.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "multi-extrusion" in claim 3 is used by the claim to mean "a preform of a part of a refrigerator is first extruded and the preform is then put into a mold

to form the antibiotic layer thereon," while the accepted meaning is extrusion of multiple layers or co-extrusion. It is suggested applicant amend the claim by replacing "through multi-extrusion" with "by first extruding the preform of the part and then placing the preform in a mold and forming the antibiotic layer thereon."

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Niira et al. (US 5556699, previously cited).

Niira discloses a method comprising for processing a part using a silver-based antibiotic substance, comprising the steps of: forming a preform of the part to have a thickness relatively smaller than that of a finished product of the part through an extrusion process (column 5, lines 1-15); mixing 0.05 to 0.1% by weight of the silver-based antibiotic substance (column 2, lines 54-59) in the form of pellets (column 4, lines 18-24) with a resin based on the total weight of the resin; and forming an antibiotic layer on a surface of the preform of the part using the resin with the antibiotic substance mixed therewith (column 5, lines 1-15). It is noted that Miira's method is capable of processing a part of refrigerator.

As to claim 3, Nirra discloses a process wherein the antibiotic layer is formed on the surface of the part of the refrigerator through multi-extrusion (column 5, lines 1-15).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton et al. (US 2004/0137202) in view of Nirra et al.

Hamilton discloses a method comprising for processing a part using a silver-based antibiotic substance, comprising the steps of: forming a preform of the part to have a thickness relatively smaller than that of a finished product of the part through an extrusion process (figure 3, paragraph 0072); mixing a silver-based antibiotic substance in the form of pellets (paragraphs 0035-0037) with a resin; and forming an antibiotic layer on a surface of the preform of the part using the resin with the antibiotic substance mixed therewith (paragraphs 0055, 0072, 0138-0144). The reference is silent as to the

Art Unit: 1791

specific weight percent the silver based antibiotic substance comprises in the resin. Niira discloses a method of forming an antibiotic film on a part, and further discloses mixing 0.05 to 0.1% by weight of the silver-based antibiotic substance (column 2, lines 54-59) in the form of pellets (column 4, lines 18-24) with a resin based on the total weight of the resin as discussed above. Niira further discloses that it preferable to mix 0.05 to 0.1% of the silver based substance with a resin. Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to mix 0.05 to 0.1% of the silver based substance with a resin in the method of Hamilton as taught by Niira above.

As to claim 7, Hamilton discloses that the silver based substance can be mixed into both an antibiotic layer and the part (paragraph 0020). Thus, Hamilton discloses a method wherein the preform of the finished product of the part is formed by means of a master batch method using the resin with the silver-based antibiotic substance mixed therewith.

12. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reese in view of Niira.

Reese discloses a method for processing a part of a refrigerator (column 7, line 56-61) comprising the steps of: forming a preform 11 of the part to have a thickness relatively smaller than that of a finished product of the part through an extrusion process (figure 1) and forming a layer 16 comprising resin on a surface of the preform of the part (column 2, lines 16-61) The reference is silent as to a method wherein the layer is formed by mixing 0.05% to 0.1% by weight of a silver based antibiotic substance in the



form of pellets with a resin and forming an antibiotic layer on a surface of the preform of the part using the resin with the antibiotic substance mixed therewith. Niira discloses a method of forming an antibiotic layer on the preform of a part, said layer formed by mixing 0.05 to 0.1% by weight of the silver-based antibiotic substance (column 2, lines 54-59) in the form of pellets (column 4, lines 18-24) with a resin based on the total weight of the resin. The advantage of forming an antibiotic layer on a part is that said layer gives the part antibiotic properties. Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of Reese by forming an antibiotic layer taught by Niira onto the preform of the part of Reese.

As to claim 3, Reese teaches a method wherein the antibiotic layer is formed on the surface of the part through multi-extrusion (figure 1).

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niira as applied to claim 1 above, and further in view of Myers (2002/0185199).

Niira discloses the limitations with respect to claim 1 as discussed above, and the reference further discloses a method wherein the silver-based substance comprises an oxide of an Ag ion and a zinc oxide (Reference Example). Niira is silent however, as to the presence of zirconium phosphate and applicants claimed weight percent composition. Myers discloses a method of mixing a silver based antibiotic substance with a resin, and forming a layer comprising the mixed substance on the surface of a part. The reference further discloses that it known the art for said silver based substance to further contain zinc oxide and zirconium phosphate (paragraphs 66, 78,

Art Unit: 1791

92, 22, claim 1). The presence zirconium phosphate further enhances the antibiotic properties of the mixture. Although Myers is explicitly silent as to applicants claimed composition, the examiner asserts one of ordinary skill in the art would have achieved applicant's claimed substance composition by performing routine experimentation. Absent any unexpected results presented by the applicant, the claimed composition does not patentably distinguish the instantly claimed method from the prior art. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of Miira such that the silver based substance contains zirconium phosphate as taught by Myers. Additionally, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to use a silver based substance comprising applicant claimed composition, as achieving such a composition is well within the purview of one of ordinary skill in the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER SCHATZ whose telephone number is 571-272-6038. The examiner can normally be reached on Monday through Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER SCHATZ/

Examiner, Art Unit 1791

/Richard Crispino/

Supervisory Patent Examiner, Art Unit 1791